Lectotypification of *Myriophyllum oguraense* (Haloragaceae)

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ABSTRACT. The lectotype is designated for *Myriophyllum oguraense* Miki, a species described from Japan in 1934. This taxon is listed as an endangered species in Japan. Among Asian taxa, *M. oguraense* is distinguished by its monoecious habit and glaucous leaves.

Key words: China, Haloragaceae, Japan, lectotypification, *Myriophyllum*.

Myriophyllum oguraense Miki (Haloragaceae) is an aquatic species confined to East Asia with a disjunct distribution between Japan (Miki, 1934, 1937; Hara, 1954; Ohwi, 1965; Iwatsuki, 1992; Ohwi & Kitagawa, 1992; Kadono, 1994) and China (Yu et al., 2002a, b). It is readily distinguished from other Asian species of the genus by its monoecious habit, glaucous floral leaves each with seven to nine (to 13) incurved and overlapping pinnae, and long cylindrical turions. This species has been listed as endangered in Japan by the Environmental Agency of Japan (2000) due to the potential threats of increased loss, fragmentation, and degradation of suitable habitat. This species will also be recorded by the *Flora of China* (J. Chen, pers. comm.). While revising the Asian *Myriophyllum* L., an evaluation of type material for *M. oguraense* led us to conclude that the name *M. oguraense* required lectotypification.

Myriophyllum oguraense was proposed as a new taxon by Miki (1934), based on his gatherings from three localities in Honshu, Japan, i.e., "Honshu: Prov. Yamashiro: Pond Ogura (*S. Miki!*, s.d.); Honshu: Prov. Yamashiro: Pond Takara (*S. Miki!*, *9. XI. 1925*); Honshu: Prov. Ohmi: Kaya in Omatsu (*S. Miki!*, *13. XI. 1932*)." In the protologue of *M. oguraense*, Miki provided a full description with detailed illustrations showing a floral leaf (1934: fig. 8D) and staminate and pistillate flowers (1934: fig. 8B, C), as well as a plate showing the inflorescences (1934: pl. IA). However, he did not designate a single specimen as the type of this species but referred to all three gatherings as types. Therefore, these specimens are regarded as syntypes under Art. 9.4 of the *International Code of Botanical Nomenclature* (McNeill et al., 2006).

Our examination of the original material of *Myriophyllum oguraense*, which is deposited in the Osaka Museum of Natural History (OSA), revealed that this consists of 25 specimens on separate sheets. All were collected and identified entirely by Miki, who labeled them with collection dates and localities, but without collection numbers. After examining these 25 specimens, we found that all agree with the description of *M. oguraense* and correspond to the three localities and dates indicated in the protologue. Therefore, these 25 sheets all represent syntypes from the three localities and dates (Miki, 1934). It is appropriate that a lectotype of the name *M. oguraense* should be selected from the 25 sheets in OSA.

Of the original material, "Honshu: Prov. Yamashiro: Pond Takara (*S. Miki 9. XI. 1925*)" and "Honshu: Prov. Ohmi: Kaya in Omatsu (*S. Miki 13. XI. 1932*) [the location Kaya is not known precisely now, it may be a pond near Lake Biwako]" are single specimens, which are strictly vegetative and labeled with collection dates, while "Honshu: Prov. Yamashiro: Pond Ogura (*S. Miki*)" consists of 23 specimens collected at different times from 1922–1927, i.e., 24 Apr. 1922 (one sheet, OSA 217549), 28 May 1923 (one sheet, OSA 217550), 7 July 1923 (three sheets, OSA 217551, 217552, 217553), 29 Oct. 1923 (one sheet, OSA 217554), 4 Nov. 1925 (one sheet, OSA

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217555), 10 Nov. 1925 (one sheet, OSA 217556), 27 Nov. 1925 (one sheet, OSA 217557), 2 Dec. 1925 (one sheet, OSA 217558), 5 Dec. 1925 (four sheets, OSA 217559, 217560, 217561, 217562), 3 July 1926 (two sheets, OSA 217563, 217564), 2 Aug. 1926 (three sheets, OSA 217565, 217566, 217567), 2 Sep. 1926 (two sheets, OSA 217568, 217569), 21 Sep. 1926 (one sheet, OSA 217570), and 6 June 1927 (one sheet, OSA 217571). The reexamination of these 23 specimens revealed that only two of the three sheets (217565 and 217567), collected by Miki on 2 August 1927, bear flowers while the remaining 21 are entirely vegetative.

In this particular case, these latter two fertile specimens (*Miki s.n.*, OSA 217565, 217567) are candidates for lectotypification. Even though both sheets show adequate representation of flowers and floral leaves, OSA 217565 is preferable to OSA 217567 because the fragment capsule attached on the former contains a dissected flower that corresponds faithfully to the floral elements quoted in the protologue. It is obvious that this specimen (OSA 217565) was the one used by Miki for the illustration in the protologue of *Myriophyllum oguraense* (Miki, 1934: fig. 8B, C). It is also noteworthy that the specific epithet chosen by Miki ("*oguraense*") refers to the "Pond Ogura" from which these specimens originated. Therefore, we here select and designate sheet OSA 217565 as the lectotype of *M. oguraense*. We also add to this lectotype the collection date 2 August 1927, which is taken directly from the specimen label.

Myriophyllum oguraense Miki, Bot. Mag. (Tokyo) 48: 335. 1934. TYPE: Japan. Honshu: Prov. Yamashiro, Pond Ogura, 2 Aug. 1927, *S. Miki s.n.* (lectotype, designated here, OSA 217565).

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